Q. Right.
A. Normally, the dies should ascend until a point where the upper and lower die halves come together and create the proper tonnage to produce the given bend, which for our practical purposes is like a closure.
Q. Okay. Do you have any knowledge as to what the machine was set on the day of Mr. Shaffer's injury, as far as the stroke?
A. Specifically, no.
I can make a very reasonable assumption.
Q. Okay.
A. That it was set for the dies to close on the size piece that they were working prior to him being summoned to the machine.
As I understand the circumstances, he was asked to come over and look at the machine, which had been in production. And so I would make the logical assumption that the dies were set to reach a closure point; in other words, when they went to the maximum up position, there wouldn't have been clearance or anything.
Q. Do you know or has anyone indicated what -- I was wondering if anyone from Newco had told you what they actually do with this particular press brake?

A. Let me answer your question this way.
Nobody from Newco told me, specifically. My understanding is that this press is used as a general purpose machine and they manufactured basically coffee makers and alike and they use it to bend the sheet metal that forms components of that assembly.
Remember we went to the back room there. They had all their coffee pots laid out when we were done.
Q. Okay. So based on your understanding, do you have any idea how thick this sheet metal would be that Newco generally bends?
A. Yeah, I would say it's not plate. It's relatively thin.
Q. Can you define relatively thin?
A. Well, maybe 16 gauge.
Q. How thick is that in terms of 16th of an inch?
A. You got to remember the Birmingham Wire Gauge numbers. Off the top of my head, I would say it's probably in the order of a 16th of inch, .003 seconds maybe.
Q. So would it be reasonable to believe that the die -- at the time of Mr. Shaffer's injury

the stroke was probably set to either touch the die or be within 16th of an inch of the die or so?
A. The upper part, yeah.
Q. The upper stroke?
A. Upper travel limit; very reasonable.
Q. What is your understanding of the job -- the process that Mr. Shaffer was attempting to do relative to this press brake at the time of his injury?
A. Well, I guess you would derive that from a couple of places. Of course, his deposition testimony has set forth what he was doing. There was Herbert, the guy that was standing to the right -- to the rear of him watching the procedure. Of course, there is some service -- prior service orders or records that speak to this machine, and if I take it a step further, I know where in the parts manual all these parts are that relate to that. So one assimilates all of those, that would form my understanding of what he was attempting to do.
Q. What was he attempting to do?
A. He was attempting to analyze a problem, which purportedly was that the lower limits setting for the beam would not hold his position and it would either drift or overshoot what would be the lower setting.
Q. Does that mean in plain English that when

the ram which travels upward to contact the dies to bend the metal drops back down, that it was dropping down lower than the people at Newco wanted it to stop -- at a point lower than they wanted to stop; is that correct?
A. I take umbrage I didn't use plain English. I thought it was pretty plain.
Q. Well, it was very plain for people who are familiar with machinery, but it might not be for people in the world who are not.
A. Well, you lose specificity when you oversimplify it.
But the beam has the capability of having an upper limit and lower limit on this travel. There was no problem with where it was going at the upper point. When you released the activation device and the beam would go to its lower position or its rest position, it apparently was dropping below the set point that they wish to have, and that was the problem that Mr. Shaffer was investigating.
Q. Okay. Have you done any analysis of that problem to determine to your own satisfaction what might have caused it to cause that beam to go to a lower position, lower than they wanted to, not stay at the properly set position?

Esquire Deposition Services
1-800-247-8368

EXHIBIT B

IN THE UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF MISSOURI

CIVIL ACTION NO. 4:01-CV-01767-CDP

- - -

DONALD SHAFFER, :

Plaintiff, :

:

-vs- :

:

AMADA AMERICA, INC., :

Defendant. :

- - -

DEPOSITION UNDER ORAL EXAMINATION OF

PETER J. SCHWALJE, P.E.

EDISON, NEW JERSEY 08817

SEPTEMBER 24, 2002

- - -

REPORTED BY: SILVIA PEREZ WAGE, CSR

- - -

JOB NO. 21445

EXHIBIT B

very precisely cause incremental motion of that without having to depend on using your foot on the treadle bar to reach a position.

Q. So by dialing the manual pulse generator, one would raise and lower the ram and that is how one would -- and when one -- and when the individual lowering the ram or adjusting the bottom position of the ram, how do they lock it into --

A. When you get it into position, you bring it up and lock it into position.

Q. That would be the lever --

THE STENOGRAPHER: You're talking over one another and it's hard.

Please repeat your question.

(There is a discussion off the record.)

BY MR. MEACHAM:

Q. So if an individual was utilizing the manual pulse generator to set the bottom position of the lower beam, that individual would turn the manual pulse setter and lower the beam to the desired position and then would lock the beam in the bottom position by use of the lever, which you previously circled on the left side of the machine; is that right?

A. You'd lock your setting by virtue of using the lever shown in P-7 for identification.

Q. Okay. Mr. Shaffer, as I understand -- what is your understanding of what Mr. Shaffer was doing?

A. Mr. Shaffer was not concerned with the actual position of that lower beam but was concerned with the mechanism which held -- set and held the position. He was looking in the area of these vertical plates to see or ascertain how that mechanism was functioning.

Q. Those being vertical plates which you discussed earlier being part of the breaking mechanism?

A. Correct.

I'm sorry, part of the what?

Q. Interlocking mechanism or --

A. Not the breaking --

Q. Right, the locking mechanism.

And so in order to observe the operation of the machine or whatever, what was he actually doing with the machine, what's your understanding of what he was actually doing?

A. He would depress the foot treadle, cause the beam to rise up to the almost closure point, release the pressure, allow it to descend, then he would engage the lock, and he wanted to determine if it would hold that position or would not hold that position.

Q. And is it your understanding that -- or do you have an understanding of whether the beam was holding its position at that time?

A. Well, the -- well, I can only tell you what was in the depo testimony; wasn't there at the time.

Q. Right.

A. Apparently, the people at the plant thought it was drifting from that position.

In his testimony, I didn't recall or I don't recall him stating whether he found that to be true or not.

Q. Okay.

A. Mr. Meacham, you want your pen back?

Q. Thank you.

On Page 5 of your report, next to the last paragraph, fourth full paragraph you discuss the many different configurations of dies, et cetera; is that -- as I understand it, your opinion is that the brake manufacturer cannot possibly anticipate the tooling that would be installed in the brake as a part of the many metal forming systems in which the brake may be employed?

A. Correct.

Q. What significance does that have, different tools or dies that might be used on the brake, what's significance does that have with regard to machine guarding?

A. Because without the knowledge of the tooling, you don't know the parts that's going to be formed, its configuration, and without that knowledge, you can't provide an effective safeguard.

Q. Have you learned anything -- have you learned what types of dies or tooling they used at Newco on this particular press brake?

MR. PESCE: Just so I'm clear, are you talking on the day of the accident or on the day of the inspection or both?

MR. MEACHAM: Well, on the day of the accident and then prior thereto.

A. No, I made no inquiry.

Q. Okay. Have you done any specific testing to determine what types of guarding may have been used on this particular machine?

A. I don't understand that question.

Q. Have you --

A. I don't know what kind of tests you would envision being performed.

Q. Well, I don't either.

A. That's why I didn't understand your question.

Q. Have you -- did you study any feasible guarding systems that might have been utilized on this

Esquire Deposition Services
1-800-247-8366

machine?
A. I would say, yes.
Q. Okay. What?
A. Well, the most obvious one would be the fact that this press brake provides you the ability to limit the total strokes of the machine.
If I'm performing operations on a relatively light gauge sheet metal material and I'm producing very small bends on that material, I can set the opening and closure of the die space to a quarter-inch or less and safeguard that particular operation simply by that adjustment mechanism.
If I am to perform other types of operations, I'd have to evaluate what I'm doing and what role the operator is playing, all the facts that are items that would go into that particular setup to make that next determination. There's multiple types of safeguarding devices which could have applicability to the machine.
Q. Can you set forth for me what types of safeguards might have applicability to this machine?
A. It is -- in some instances one could use a barrier guard that is fixed; one can use die guards that are fixed to the dies. You could use fixtures

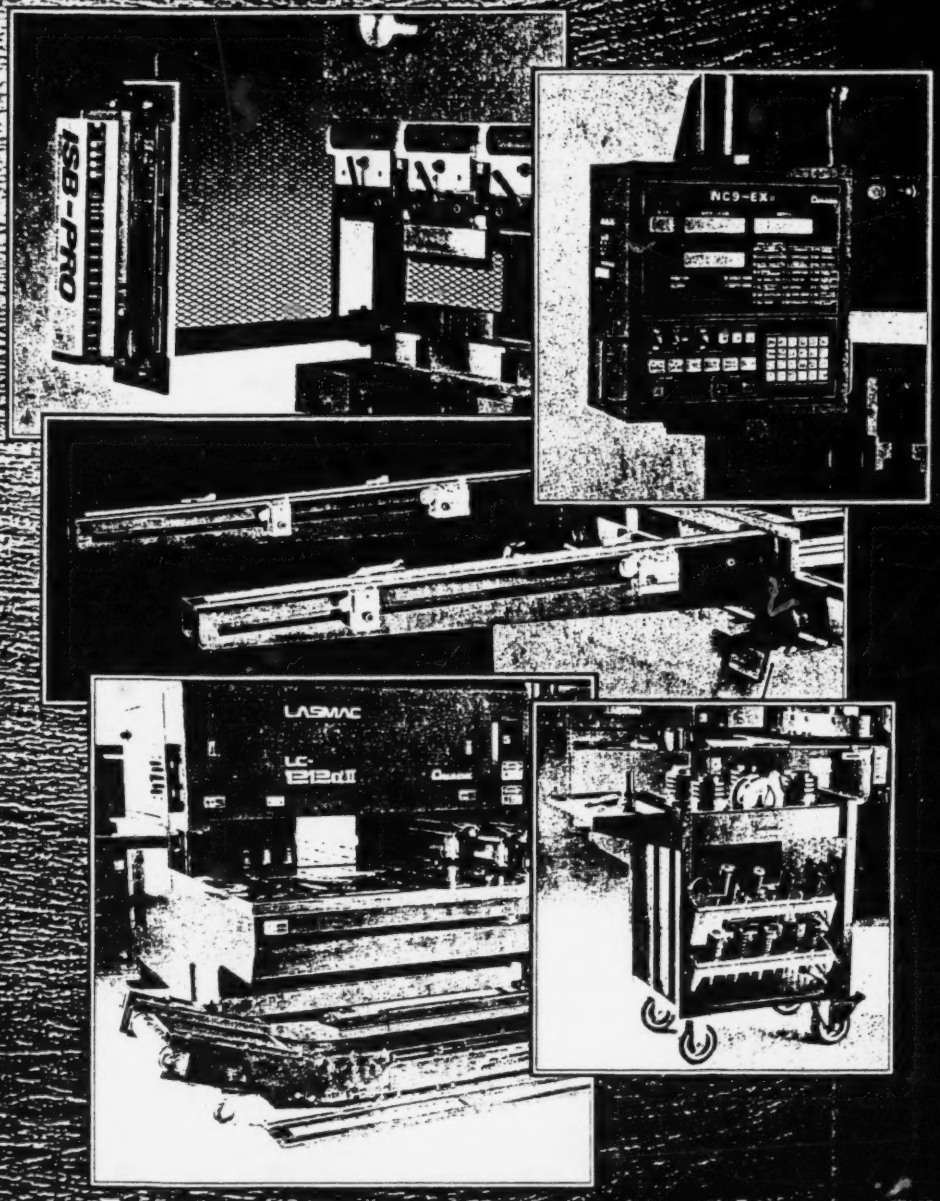
which introduce and remove the material from the die space without the operator having to hold the piece while the inserting is going on of the removal. You can use restraint devices which limit the forward motion of the operator's hands. You could use a pullback mechanism working off an overhead mechanism to force the operator's hands back from the point of operation. You could use forms of present sensing devices such as photoelectric or -- well, we're getting away from RF, radio frequency devices.
Q. As a present sensing device, is that something that's commonly called a light curtain?
A. That's a generic name, yes.
Q. How does that work?
A. It establishes an energy beam, which is in a spectrum normally away from visible light or incandescent light, and establishes in essence a field which projects across the front portion of the machine. The field will sense an interruption. It will send you a signal to a control device and that will inhibit motion.
Q. Would there have been in your opinion any reason why a present sensing device could not be utilized to safeguard the machine during the operation that Mr. Shaffer was performing at the time of his

injury?
A. Well, Mr. Shaffer wasn't operating the machine. He was doing a service function.
Based on the operation that was being performed, it would be unlikely that a light curtain or present sensing device would be applicable to the specific processes that they were performing.
Q. What specific processing would that be?
A. Well, they -- producing portions of coffee pots. They were using multiple flange bending operations to produce parts.
If you recall, the individual immediately to the left of the machine was there performing multiple operations with multiple flanges. That interposes the part within the field and would not allow you to perform the operation with that type of safeguard.
And if you refer to Industrial Data Sheet 419, that is specifically one of the very operations that limits the present sensing device applicability. It says, specifically, will not allow for multiple flange bending operations, which is precisely the principal operation I've seen them performing there.
Q. Would the operation that they were performing there interfere with the ability to have a fixed guard?

A. Probably, yes.
Q. Did you analyze the operation to determine whether or not some type of fixed barrier could be utilized?
A. No.
Q. Is there a reason why you didn't analyze that operation?
A. Is there a specific reason why?
Q. Yes.
A. There was no specific reason.
I would say I did not do it for the fact that basically I was concerning myself with the design issues of this machine, and since it's very well recognized and known that those types of analysis and decision making process lies with the employer, their system assembler, that would be Newco's responsibility.
Q. Would the operation that was the type of bending operations that Newco had performed that you had described here, would the use of restraint device have hindered that operation in your opinion?
A. Probably not.
Q. Okay. How about pullback devices, would they interfere with the Newco operation as you described it?
A. I would think not.

Esquire Deposition Services
1-800-247-8366

EXHIBIT C



ESi

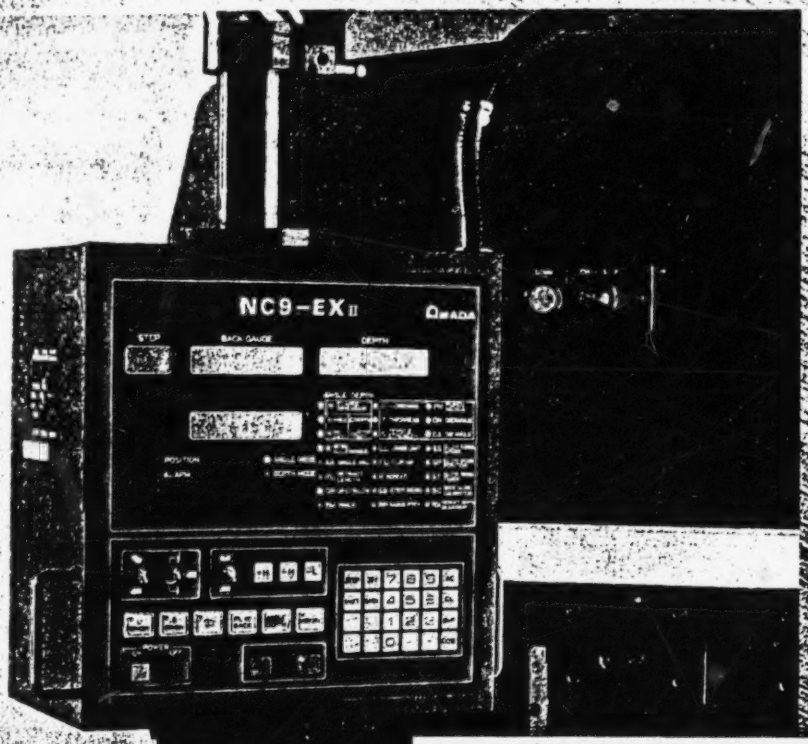
RETROFIT ACCESSORIES CATALOG FOR AMADA MACHINES

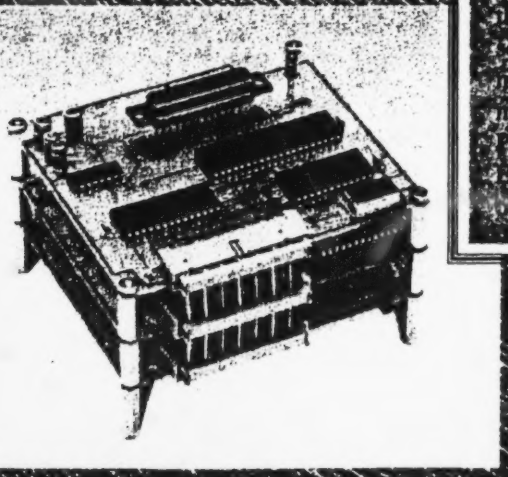
EXHIBIT C

AA 0495

PRESS BRAKE ACCESSORIES

ONE, TWO AND THREE AXES BACKGAUGES

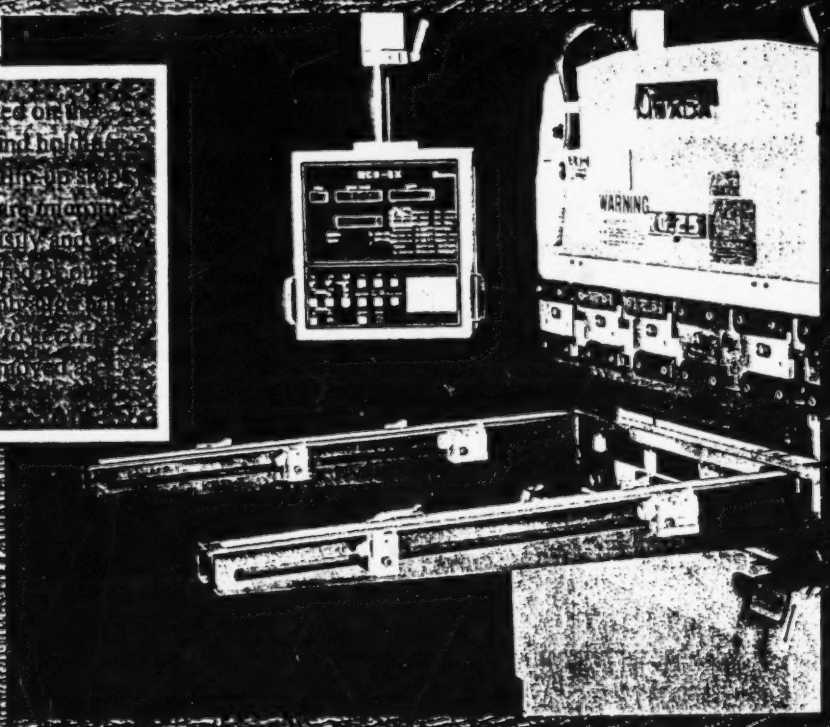




AA 0496

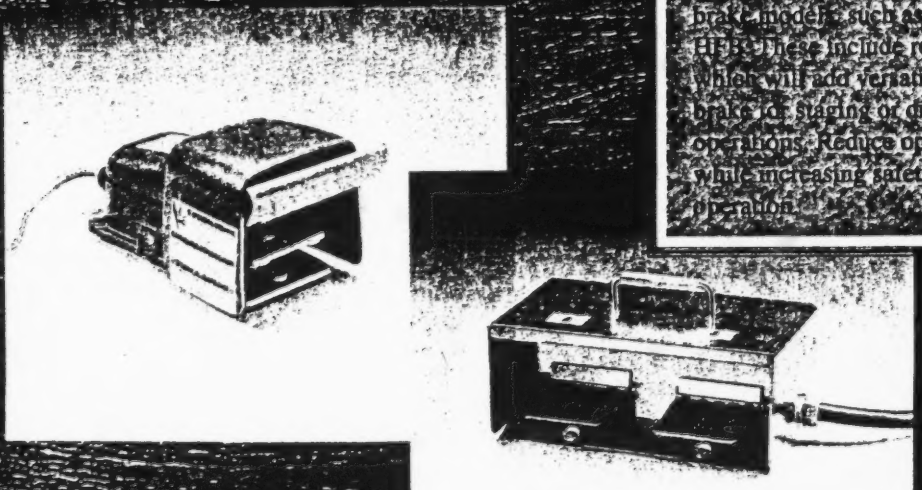
FRONTGAUGE RR ARMS

The frontgauge is mounted on the lower table for positioning and holding workpieces. A variety of tooling options are provided. Two of these are memory type allowing operators to easily and accurately locate workpieces. Each of these options can be positioned vertically to clear tooling and workpieces.



FOOT SWITCHES

Amada Engineering provides a full line of foot switches for all press brake models, such as RG, EBD and HFB. These include retrofit switches which will add versatility to your press brake for staging or dual operation operations. Reduce operator fatigue while increasing safety of the bending operation.



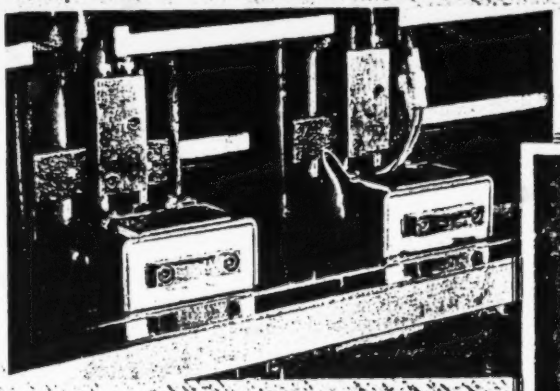
PRESS BRAKE ACCESSORIES

AA 0497

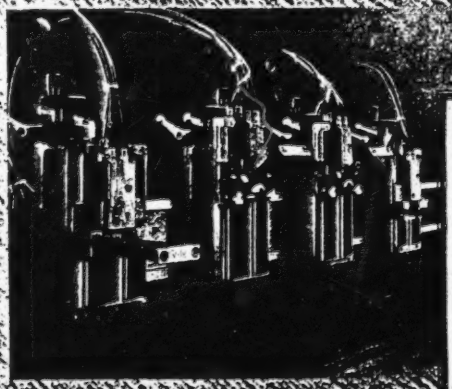
BEST AVAILABLE COPY

AMADA ENGINEERING & SERVICE CO., INC.

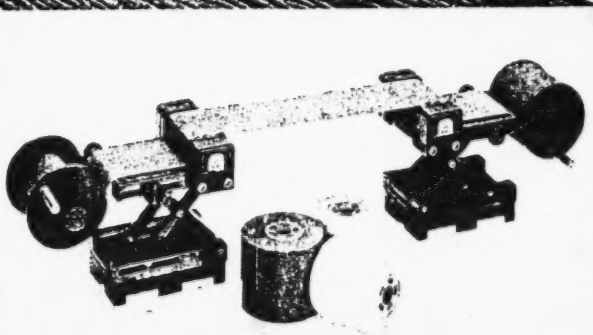
ELECTROMAGNETIC FINGERS



FLIP FINGER ASSEMBLY



MARKLESS MATERIAL PROTECTION SYSTEM



ISB Programmable Light Curtain

The ISB Programmable Beam plate-mounted light curtain is a productive safety solution for Amada press brakes. Amada ISB light curtains provide optimum safety with minimum production interruption. The intelligent control system of the operator allows the workpiece profile to determine which beams are activated. Safety no longer has to come at the expense of productivity.

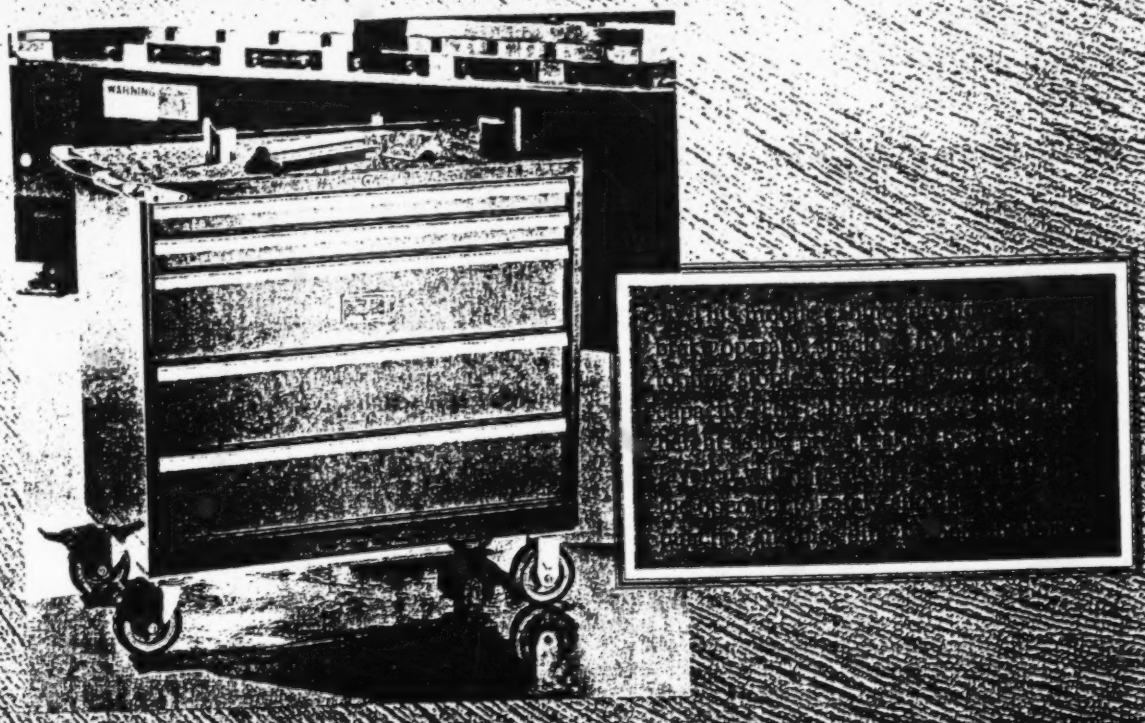
Dual Palm Buttons

Press Brake Safety

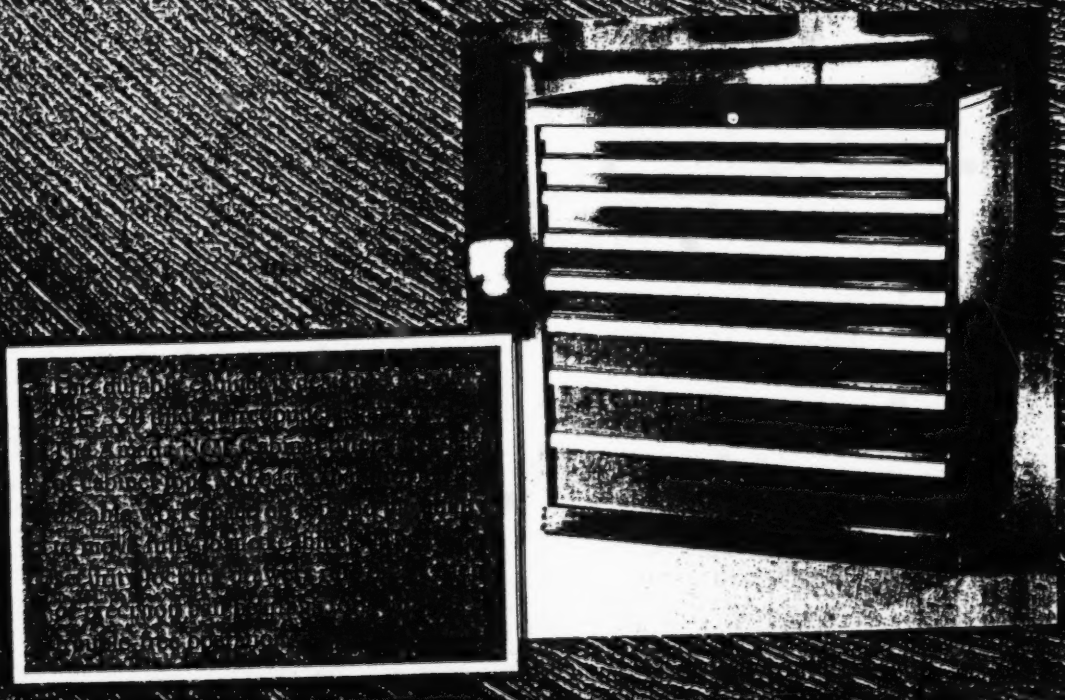
AA 0499

Amada Engineering & Service Co., Inc.
Phone 800 854 3567

MOBILE BRAKE TOOLING CABINET

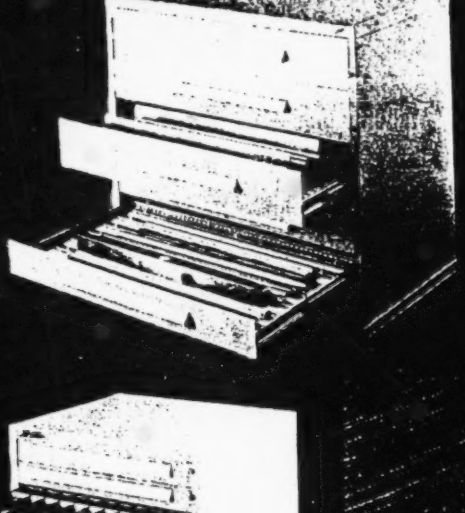


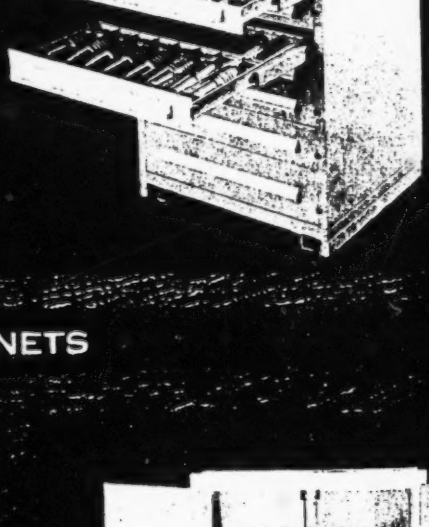
NCT TOOL CABINET



AA 0500

DRAWER CABINETS

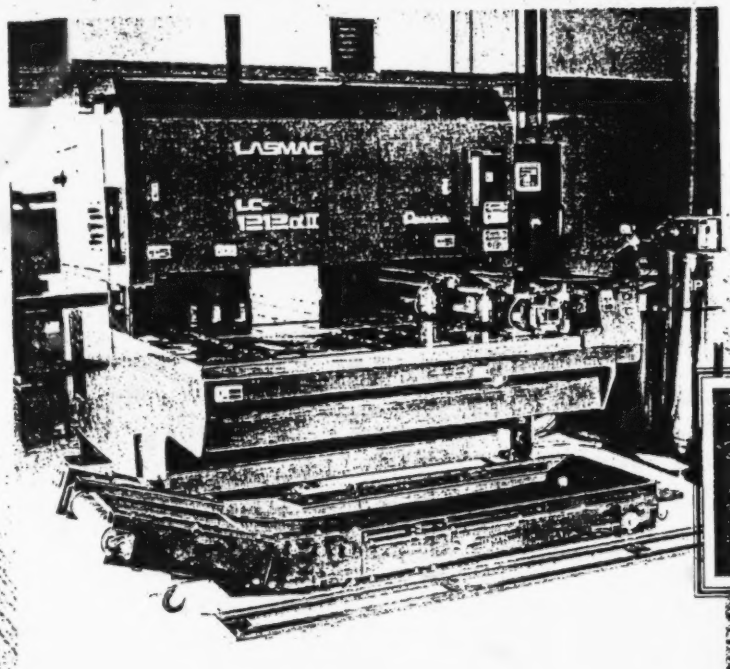




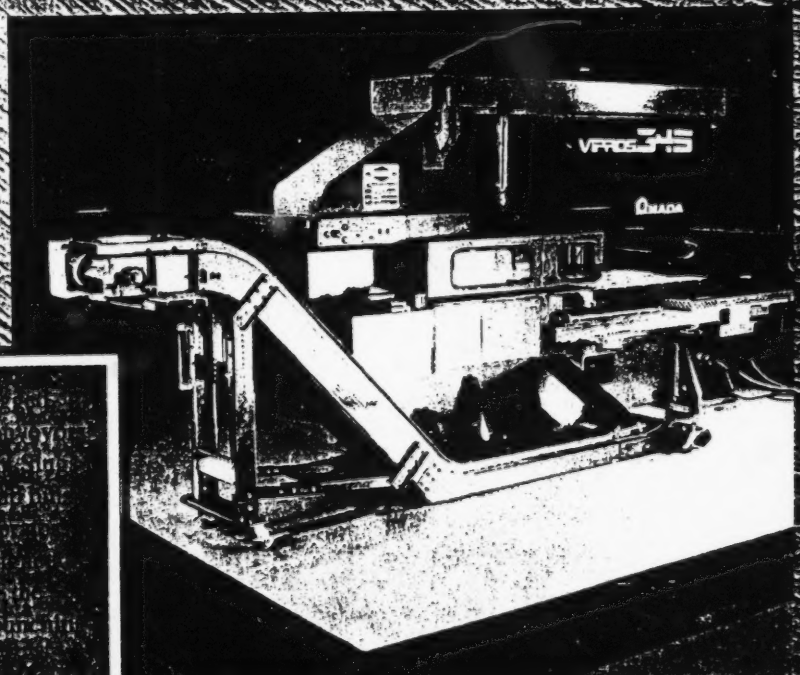
ROTARY CABINETS

AMADA ENGINEERING
& SERVICE CO., INC.
PHONE: 800 854 3567

LASER CONVEYORS

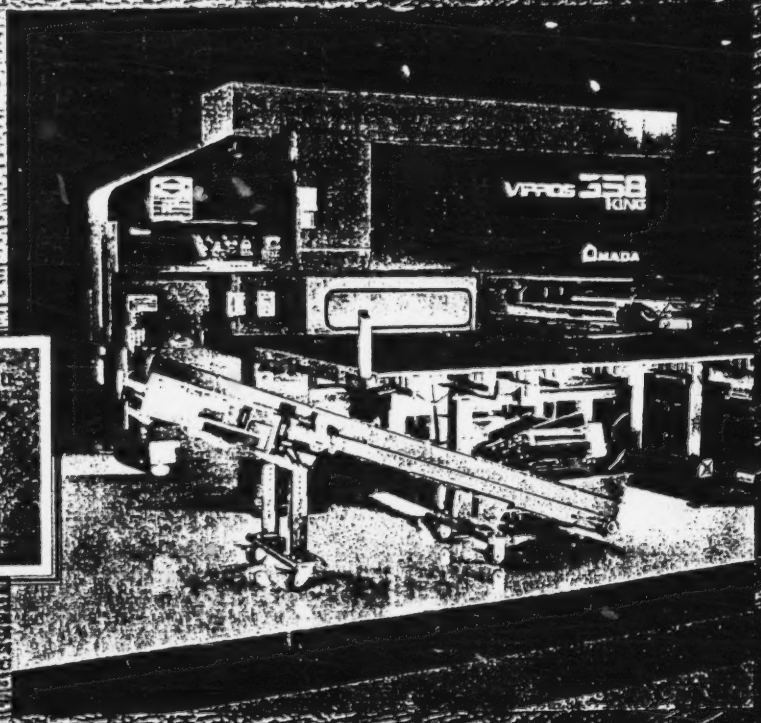


PEGA, COMA, VELA CONVEYORS



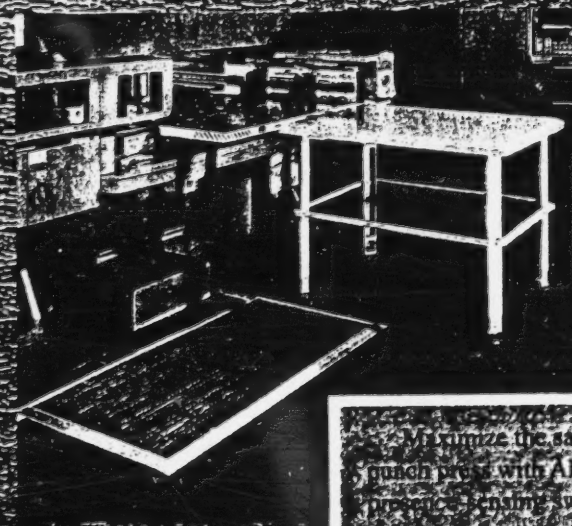
AA 0502

VIPROS CONVEYORS



The fastest, most accurate hydraulic machines in the industry don't need to be slowed down by scrap removal problems. AESI has conveyors to keep up with all of Amada's state-of-the-art Vipros models.

SUBTABLES AND SAFETY MATS



[illegible] the work [illegible] punch press with [illegible] mobile support tables. Subtables keep larger sheets from bending or jamming the punch [illegible] can service a [illegible] requiring a single operator.

Maximize the safety around your turret punch press with AESI's safety mats. These presence sensing switchmats provide effective safety barriers to both workers and vehicles entering hazardous or restricted machine and production areas. AESI offers a wide variety of sizes and configurations to fit your machine and safety requirements.

PUNCH PRESS ACCESSORIES

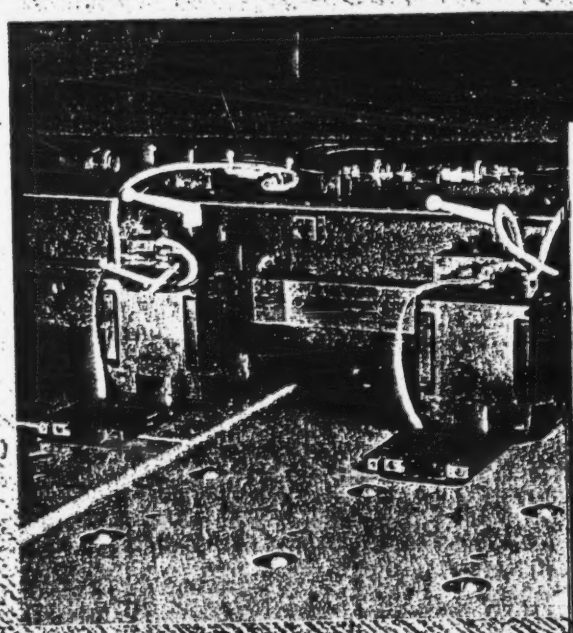
CONVEYORS

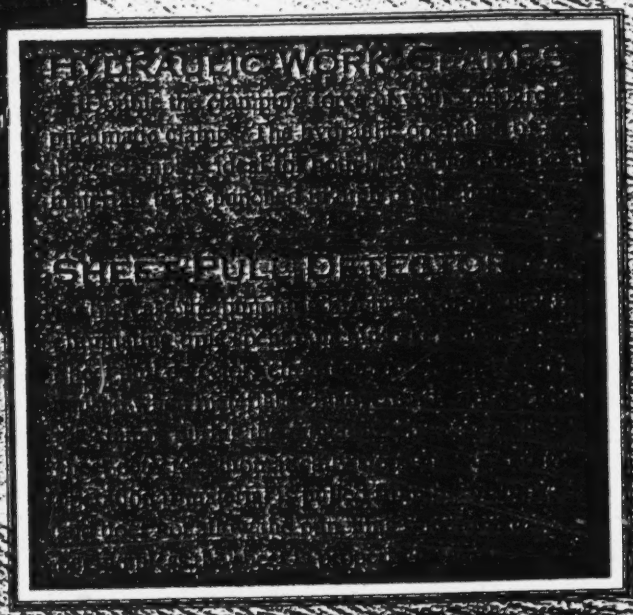
AA 0503

AMADA ENGINEERING & SERVICE CO., INC.

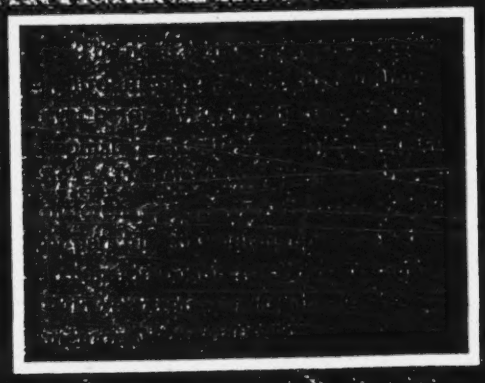
PUNCH PRESS ACCESSORIES

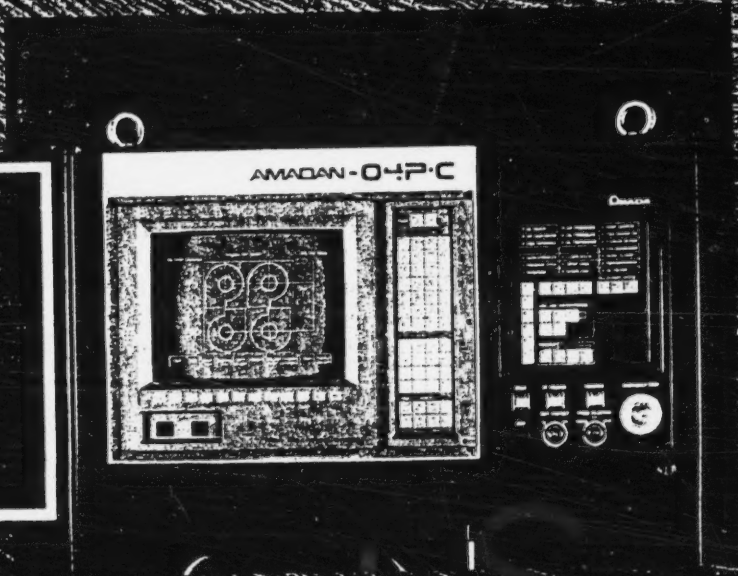
WORKCLAMPS AND SHEET PULL DETECTOR



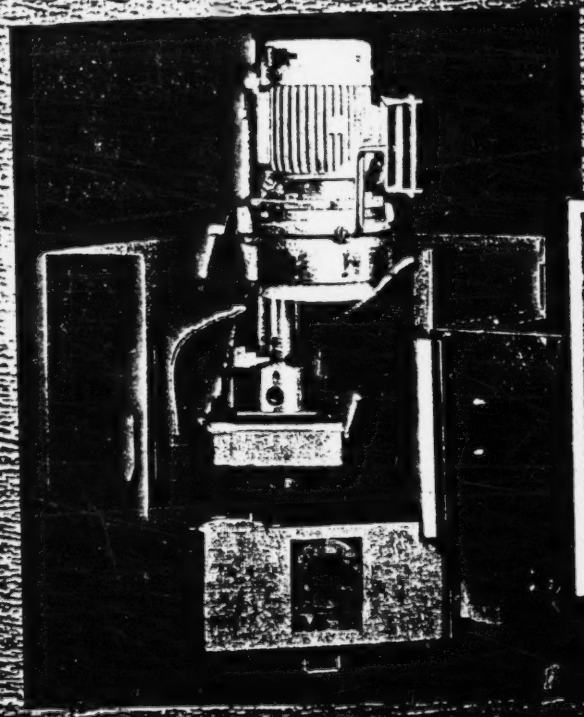


MEMORY EXPANSION





TOOL GRINDER TEG 160



Reduce down time and [illegible] with grinding tools, whether [illegible] tool. Designed especially for grinding [illegible] quality tool steels such as [illegible] and dies, the TEG-160 employs [illegible] grinding stone and a fluid cooling [illegible] together they produce an excellent [illegible] finish while they prevent [illegible] burn. With the use of two accessories [illegible] the TEG-160 allows precision [illegible] of shear angled punch.

MACHINE MOUNTS

PUNCH PRESS ACCESSORIES

AA 0505

AMADA ENGINEERING
& SERVICE CO., INC.
PHONE 800 . 854 . 3567

TERMS AND CONDITIONS

ORDERING PROCEDURES

AMADA ENGINEERING & SERVICE CO., INC.
14921 EAST NORTHAM STREET
LA MIRADA, CA 90638-5798
PHONE 800 . 854 . 3567
FAX 714 . 670 . 8637

AMADA ENGINEERING & SERVICE CO., INC.
799 BIERMANN CT., SUITE 120
MT. PROSPECT, IL 60056
PHONE 800 . 426 . 4204
FAX 847 . 699 . 1562

EXHIBIT D

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

DONALD SHAFFER,	)	
	)	
Plaintiff,	)	
	)	
Vs.	)	Cause No. 4:01CV01767 CDP
	)	
AMADA AMERICA, INC.,	)	
	)	
Defendant.	)	

DEPOSITION OF DONALD SHAFFER
On behalf of Defendant
May 9, 2002

TINA M. STUMPF, RPR, CSR
PREMIER REPORTING SERVICES
101 EAGLE LAKE DRIVE
COLUMBIA, IL 62236
(618) 281-7461 (314) 623-0763

ORIGINAL

EXHIBIT D

kind of press down on the bottom of it with the tip of your toe --

A. Right.

Q. -- is that like an on off switch, in other words, you press on it and it goes on and the ram moves at one speed?

A. On that specific machine? Because it's difrerent from machine to machine.

Q. Oh, okay. On the model press brake at issue, have you ever seen an electric foot switch on it?

A. No.

Q. Are you aware if any manufacturer makes an electric foot switch for the model press brake at issue?

A. Amada makes a foot switch.

Q. Does it -- Strike that.

Are you aware if Amada makes an electric foot switch for the model press brake at issue?

A. I'm aware that they have one available. I don't know who makes it.

Q. I'll try it a different way. Are you aware if a -- Strike that.

Are you aware if the electric foot switch that Amada has can be installed on the press brake at issue?

A. I am aware that they have a foot switch

that can be bought and put on that machine.

Q. On the model press brake at issue?

A. Right.

Q. For the foot switch for the model press brake at issue, do you know if that's an on off switch, in other words, you press it on and the ram only goes at one speed or can you vary the speed of the ram?

A. Because I've never installed one on that specific machine, I don't know what type of foot switch they have for that specific machine.

Q. Okay. How about this. On the foot switches that you have installed, do they operate as an on off switch that the ram would only go at a constant speed?

A. They have some that I've installed as a retrofit. They had at one time that they tried to use potentiometers and things like that. So I don't know how their history is. They had another foot switch at another time which was you push up acting and then they have another two foot switch is acting as one. One brings it up and the other brings it down. And then for the most common one that I've used is the foot switch that's a quick retrofit and I'm not sure if it's variable. I don't think that it is, but I don't know for sure.

Q. So to make sure I understand, on the foot switches, you're saying that there are different types of foot switches such that some foot switches you can make it so that the ram goes at varying degrees of speed and others that it goes at a constant speed?

A. They have in the past had some foot switches. I have never installed one. I've worked on machines. They had them available, because the customer has them on the machine that have a variable capability, but I don't know where they came from. The ones I put on, as far as I know, you can't vary the ram on it. That's what I'm saying.

Q. So the foot switches you put on when you press them, they only go at one speed, a constant speed.

A. Right.

Q. But you have seen other machines that have a foot switch where you can vary the speed of the machine?

A. Right.

Q. Okay.

A. Amada has another foot switch for another machine, the FPD that is variable.

Q. And the FPD is a press brake?

A. Press brake that has no treadle bar and it just has a foot switch.

Q. Are the foot switches on the Amada press brakes options?

A. No, not all of them. If you don't have a treadle bar, you have to have a foot switch, no.

Q. So some machines have treadle bars and some machines have foot switches?

A. Right.

Q. And is it up to the customer on whether they want a treadle bar or a foot switch?

A. I don't know how the decisions are made on what you have with the machine. I know that if they don't have a foot switch, they can buy one and have it put on.

Q. Okay.

A. But I don't know how they label it, if it's an option, if it's a retrofit. I don't know how Amada labels it.

Q. I don't know if I asked you this. I know I asked you about the treadle bar. Did you ever suggest to anyone at Newco that they should modify the press brake with a foot electric switch?

A. I told them that they should put a foot switch on that brake.

Q. When did you tell someone at Newco that they should put a foot electric switch on it?

A. I don't know.
Q. Would it have been before your accident or after your accident?
A. Before.
Q. And do you know who you told that to?
A. No. I'm not going to speculate. I don't remember who I talked to.
Q. And what did the person at Newco say when you suggested that they should put a foot electric switch on the press brake at issue?
A. I don't remember what they said.
Q. Did you tell this person at Newco why you were suggesting a foot electric switch as opposed to keeping the treadle bar on there?
A. I don't remember what I used exactly.
Q. How about generally?
A. I'd have to make something up to tell you. I don't remember.
Q. And I don't want you to make anything up.
A. I don't want to do that either.
Q. You and I are on agreement on not making things up, but let's talk about it and see if we can work with your memory. And if you just can't remember, then I'll move on to something else. You're sure prior to the accident that you suggested to somebody at Newco

that they should install a foot electric switch?
A. Yes. I do that to every customer I have that don't have a foot switch. I tell them that.
Q. And if the customer says sure, you know, Mr. Shaffer, I'll get the foot electric switch, then you'll go back and order one from Amada?
A. Right.
Q. And when you order it from Amada, do you get a commission on the sale of the foot switch?
A. Absolutely.
Q. And have you ever had any customer --
A. You know what, at that particular time, I would not have got a commission for that, because they changed how they did everything. So I didn't get commission for putting on a foot switch.
Q. So on the how many times have you told customers prior to your accident that you would recommend getting an electric foot switch as opposed to keeping the treadle bar on the press brake?
A. I don't know.
Q. Would it be more than 10 times or less than 10 times?
A. I don't know.
Q. Have you ever had a customer that said okay I'll get the electric foot switch and you can remove the

treadle bar?
A. I have never had a customer remove a treadle bar or said they were going to remove it, because it doesn't remove the treadle bar. It gives you a switch that you can turn the treadle bar on or off, which if somebody tries to push the treadle bar, it shuts the machine off to where it can't run, so that eliminates the possibility.
Q. So once you put the foot electric switch in, the treadle bar is inoperable?
A. You can make it inoperable. That's still an option. You turn a key. Treadle bar or foot switch.
Q. Let's get back to the foot electric switch. In all of the customers that you suggested that they use the foot electric switch, has any customer said go ahead and install a foot electric switch?
A. I installed a lot of them, but I can't remember how they were sold. Most of them, I think, actually most of my customers bought the foot switch with the machine and I've only had a few that would retrofit old machines, and I did have one specifically that did buy a foot switch from me.
Q. So you've said a lot. Let me back up, so I make sure I follow. Can you give me the name of any customer that you recommended a foot electric switch for

their press brake?
A. Yes.
Q. Okay. Give me the name of the customer or customers that you recommended a foot electric switch on their press brake.
A. That would be too many to name.
Q. Okay. How many customers have you recommended that they get a foot electric switch put on to their press brake to use instead of the treadle bar?
A. That would be any of my customers that had a treadle bar. I always recommended them getting a foot switch.
Q. Okay.
A. So it would be hundreds.
Q. Hundreds of customers?
A. Maybe. You know, because I've been all over the place. I mean specifically, if you want the name of one that did do that, I can give you a name with that.
Q. Go ahead.
A. I know a company in Washington, Missouri, that put one on a very old RG machine.
Q. Which is the company in Washington, Missouri that did it?
A. Daca. It's D-A-C-A.